State of Hawaii
Department of Health

Child and Adolescent Mental Health Division

Med-Quest Population Report
Fiscal Year 2003 Quarter 2

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For the Period of October 1, 2002 to December 31, 2002
Version 6-10-03

Purpose: To compare the demographic and service characteristics of the CAMHD Med-Quest population to the population of other youth registered with CAMHD.

Introduction

The Health Services Advisory Group (HSAG), an External Quality Review Organization (EQRO), conducted a quality assessment and improvement evaluation of the Hawaii Department of Health Child and Adolescent Mental Health Division (CAMHD) in spring of 2003. This review identified a variety of opportunities for CAMHD to improve its performance in the quality-monitoring domain. To respond to these opportunities, CAMHD developed a corrective action plan outlining numerous steps to be taken during the summer of 2003. One of the first steps in this plan was to assemble a task force to review and revise the CAMHD Quality Assurance and Improvement Plan (QAIP).

During its first meeting on May 28, 2003, the task force identified the need for additional information an analysis of the similarity of youth served through the CAMHD Quest plan to youth served by CAMHD through other mechanisms. The CAMHD Research and Evaluation Specialist was charged with analyzing these populations with respect to their demographics, services, and consumer satisfaction. This report summarizes the results of these analyses.

The specific research question investigated was whether statistically significant differences existed between the Quest population and the Non-Quest Population in terms of Demographics, Services, and Consumer Satisfaction. Demographic variables examined included age (in years), gender, ethnicity, interagency involvement (DHS, Court, and Incarceration), diagnostic status, and geographic region (i.e., Family Guidance Center registration). Service variables included new admissions, repeat admissions, discharges, and receipt of services for each level of care in the CAMHD service array. The average cost per youth for each level of care was also examined. Finally, the overall satisfaction scale and six subscales (i.e., acceptability, access, appropriate and respectful, employment, family participation, and least restrictive services) of the consumer survey were analyzed across Quest and Non-Quest samples.

Methods

Participants

Participants (N = 1,770) for the present study were all youth registered in the Child and Adolescent Mental Health Management Information System (CAMHMIS) for one or more days during the period from October 1, 2002 through December 31, 2002 as of December 31, 2003. Detailed information on the overall population is presented in the Interagency Quarterly Sustainability Report and the CAMHD Quarterly Sustainability Data Report. This total population was divided into Quest (n = 352) and Non-Quest (n = 1,418) groups for analysis. A youth was defined as Quest involved if the youth was recorded in the CAMHD Quest Eligibility database as eligible for Quest on one or more days during the reporting period. Quest eligibility is determined through a daily transaction that examines the list of Quest eligible youth published by Med-Quest Division and identifies those youth actively registered in CAMHMIS on that day.

Due to the smaller samples sizes selected for participation in the consumer survey, respondents over a two-quarter period from October 1, 2002 through March 31, 2003 were used for analysis of satisfaction. These respondents were also divided into Quest (n = 58) and Non-Quest (n = 188) groups. Detailed information on the consumer survey procedures and sample are available in the CAMHD Consumer Survey Report: Fiscal Year 2003.

Materials

CAMHMIS Fields. Information was gathered and entered into CAMHMIS through the standard operating procedures of the regional Family Guidance Centers. Detailed information about the structure of the CAMHMIS database is available in the CAMHMIS data dictionary. The following variables were used for the present analyses:

1. **Age** in years was defined as the difference between a youth's date of birth and the final day of the reporting period (i.e., December 31, 2003).

2. **Gender** and **ethnicity** were used directly as entered into CAMHMIS and are based on client self-presentation.

3. **Agency involvement** data (i.e., DHS, court, and incarcerated) were entered into CAMHMIS in the form of a start date and end date of involvement with each agency. A youth was defined as involved with a specific

agency if they had an active record with that agency that included a start date prior to the final day of the reporting period (i.e., December 31, 2003) without an end date prior to the period end.

4. **Diagnostic Status** was defined based on Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994) codes entered into CAMHMIS. Youth registered with CAMHD receive annual diagnostic evaluations from the Department of Education, DOE providers, or occasionally CAMHD staff. Children and youth may receive multiple diagnoses on the first two axes of the DSM system. To summarize this information, diagnoses are classified into primary categories and the number of youth receiving any diagnosis (primary, secondary, or tertiary) in each category is reported.

5. **Family Guidance Center** (FGC) was defined as the center to which youth were registered as of the final day of the reporting period (i.e., December 31, 2003).

6. **New Admissions** were counted when a new record is created for a youth previously unknown to CAMHD with a registration start date within the reporting period.

7. **Repeated Admissions** were identified whenever a previously known youth had at least one registration record during the reporting period indicating a change in registration status from a discharged status to a registered status.

8. **Discharges** were recorded when a youth had at least one registration record during the reporting period indicating a change in registration status from registered status to discharged status.

9. **Receipt of Services** was calculated based on records that were accepted as payable during billing adjudication for the Hospital Residential, Community Residential, Therapeutic Group Home, Therapeutic Family Home, Respite Home, Intensive Day Stabilization, Intensive In-Home, and Less Intensive levels of care. Service information for the Out-of-State, Community High Risk, Multisystemic Therapy, Flex, and Respite is based on the CAMHMIS service authorization database augmented by information based on manual billing collected by the Fiscal Office and weekly provider census data collected by the Clinical Services Office. A youth is identified as receiving a service if there was a record of payment for the service on at least one day during the quarter. Thus, the service receipt counts are unduplicated within a level of care, but are duplicated across levels of care. For example a youth who received one month of Hospital Residential and two months of Intensive In-Home services would be recorded as receiving both of these levels during the quarter.

10. **Total Cost of Services** was the sum of all expenditures (US$) recorded for a specific level of care.

11. **Cost per Level of Care (LOC)** was calculated as the total cost of services for a given level of care divided by the unduplicated count of youth receiving services at that level of care.

12. **Cost per Youth** represented the average cost for all services received by youth during the quarter allocated to level of care based on duplicated youth counts. For example, the average out-of-state cost per youth includes total expenditures for youth who received any Out-of-State service. If a youth receive two weeks of Out-of-State services and two months of Multisystemic Therapy for a total quarterly expenditure of $20,000, this amount would be included in calculating the averages for both the Out-of-State services and Multisystemic Therapy levels of care.

13. **Child Status Improvement** is defined as a pattern of improved function during the period that the child's status was known to CAMHD (i.e., lifetime improvement). For each youth, a linear trend is calculated using all available outcome measurements prior to and including the reporting quarter. The child is identified as improving if the point estimate of the slope of the trend line is less than zero.

Consumer Survey. The consumer survey was designed to be administered via telephone or face-to-face interview or may be administered as a self-report mail-in survey. The instructions of the consumer survey ask the respondent to report on their experiences during the six months prior to the date of administration. The caregiver version of the consumer survey can be roughly divided into three parts. The first part consists of seven satisfaction items measured on a five-point Likert scale from *Very Dissatisfied* to *Very Satisfied* and a single yes-no item asking whether the services were helpful. The second part measures the effect of services on family employment and consists of two yes-no questions assessing who in the household is employed and whether less absenteeism resulted from the services received. The employment portion also includes four items assessing improvement on a five-point Likert scale from *Not at All* to *Very Much* and one item assessing the average

reduction in absenteeism on a seven-point Likert scale from *None* to *5 or more days*. The third locally constructed portion of the survey consists of 10 items assessing the extent to which services were consistent with the Hawaii CASSP principles. These items are measured on a five-point Likert scale from *Not at All* to *Very Much*. Each instrument also included an open-ended question that allowed consumers to provide unstructured comments on their thoughts about the services received over the preceding 6 months. Six scales may be calculated from the instrument representing the domains of acceptability of services, timely and comprehensive access to services, culturally appropriate and respectful interactions and services, family employment improvements, family participation in planning and services, consideration of service delivery in a least restrictive fashion, and overall satisfaction. Final variables used for analysis were the scale means and the observed percent of respondents scoring at level 4 or 5 on the Likert scale (i.e., Quite a Bit to Ve ry Much or Satisfied to Very Satisfied). Psychometric information on this survey is reported in the CAMHD Consumer Survey Report: Fiscal Year 2003.

Procedures

Care coordinators are responsible for collecting and updating information regarding client demo graphics and involvement with other child serving agencies. While all guidance centers have a system for managing this information, the system is not standardized across centers. Most centers collect this information in on a standard paper form, but the form differs across centers. Many centers ask a stats clerk to enter this data into CAMHMIS, while other centers ask care coordinators to enter this data directly.

On the last day of each quarter, the CAMHD Research and Evaluation Specialist uses the daily registration report available in Discoverer (RPT-003), to download the population of all youth actively registered with CAMHD on that day. This information is transferred to the Statistical Package for the Social Sciences (SPSS) for sample selection. A random sample of 30% of the registered population is selected using a uniform distribution via the standard SPSS algorithm. The sample is reviewed for breadth of coverage across FGCs and school complexes. The final sample is then transferred to a Microsoft Access database designed to capture contact and completed survey information. Two copies of the database are distributed to Hawaii Families as Allies (HFAA) for data collection. Under contract, HFAA is required to provide completed surveys for 10% of the total registered population (i.e., 30% o f the sample provided). HFAA surveyors conduct the survey and complete the electronic database. At the end of the quarter, HFAA maintains paper copies of the completed surveys and returns the completed electronic database to CAMHD for analysis.

The analysis and results section provides a summary of the significant findings, and detailed results of the analyses are reported in appendices. Group comparisons were conducted using of Chi-Square Tests of Independence to examine gender and overall ethnicity effects, and through Analysis of Variance (ANOVA) to examine age, specific ethnicity groups, agency involvement, diagnosis, admissions, discharges, receipt of services, average cost per level of care, and the consumer survey scales. To control for the increased probability of Type I error associated with the large number of hypothesis tests, Bonferroni corrections to a family-wise alpha of .05 were used within analytic groups for specific ethnicities, diagnosis, agency involvement, admissions and discharges, receipt of services, and cost of services. When a hypothesis test yielded a uncorrected p-value of less than .05 but was not significant following Bonferroni correction, the result was interpreted as a **tendency**. ANOVA and Tukey HSD follow-up comparisons were also used to examine the proportion of the registered population at each FGC that was Quest involved.

Analysis and Results

Demographics

The Quest and Non-Quest groups did not significantly differ in age, F (1, 1768) = 0.22, p = .636, η^2 = .000, or gender, χ^2 (1, N = 1,770) = 0.02, p = .881. Overall, a significant difference in ethnicity was evident, χ^2 (17, N = 1,770) = 88.23, p = .000. Ethnicity information was available for a higher proportion of the Quest (80%) than Non-Quest (57%) groups, F (1, 1,768) = 63.83, p = .000, η^2 = .035. There was a tendency toward a higher proportion of mixed ethnicity (31% vs. 25%), F (1, 1,094) = 4.28, p = .039, η^2 = .004 and lower proportion of Caucasians (17% vs. 24%), F (1, 1,094) = 5.26, p = .022, η^2 = .005 in the Quest than Non-Quest groups. A significantly higher proportion of the Quest group was involved with the Department of Human Services (31% vs. 9%), F (1, 1,768) = 126.54, p = .000, η^2 = .070 and Family Court (36% vs. 20%), F (1, 1,768) = 43.48, p = .000, η^2 = .024, and there was a tendency toward greater incarceration (9% vs. 6%), F (1, 1,768) = 4.00, p = .046, η^2 = .002 in the Quest group. The Quest group also displayed a higher prevalence of anxiety disorders (14% vs. 8%), F (1, 1,768) = 12.83, p = .000, η^2 = .007, and a lower prevalence of no diagnosis recorded (0.3% vs. 5%) than the Non-Quest Group, F (1, 1,768) = 15.71, p = .000, η^2 = .009. There was a tendency toward a greater prevalence of Mental Retardation (3.4% vs. 1.7%) in the Quest than Non-Quest Groups, F (1, 1,768) = 4.18, p = .041, η^2 = .002. The

effect sizes for these effects was small (less than 1% of variance explained) for all of these effects except for the proportion of ethnicity information available.

The prevalence of Quest involvement was significantly different across Family Guidance Centers, F (7, 1,762) = 26.72, p = .000, η^2 = .096. Generally, Kauai and Family Court Liaison Branch had significantly lower Quest involvement rates than the other centers. The other centers did not significantly differ with the exception that Hawaii, the largest center with the highest Quest involvement rate, was significantly different from Windward Oahu. For Kauai, the Quest involved youth rate was analyzed as the percentage of all clients registered to Mokihana including low- and high-end services. Of the youth with a high-end service authorized during the quarter, 29% were Quest involved. This latter number would rank Kauai in the middle of the other family guidance centers. However, this is likely an overestimate of the Quest involved rate because it does not represent registered youth receiving case management services without additional services procured. During second quarter, Family Court Liaison Branch (FCLB) had enrolled 22 youth, 2 of which received service authorizations. FCLB only registers youth that are not already registered with another guidance center and generally represent youth who are court involved and incarcerated so that they are not Quest eligible.

Table 1. Quest Involvement and Percent of Total Registered Count by Family Guidance Center (Geographic Region).

Family Guidance Center	Quest Involved (N)	Quest Involved (%)
Hawaii	122	33.6
Central Oahu	43	32.3
Leeward Oahu	52	27.8
Maui	35	24.1
Windward Oahu	49	22.9
Honolulu Oahu	33	22.4
Kauai	18	3.2[a]
Family Court Liaison Branch	0	0.0

Note: [a] Quest involved youth is reported as the percentage of all registered clients on Kauai including both low- and high-end services. Of youth with high-end service authorized during the quarter, 29% were Quest involved.

Services Received

Overall, the Quest group displayed significantly less turnover than the Non-Quest Group. The proportion of new admissions, F (1, 1768) = 13.19, p = .000, η^2 = .007, repeated admissions, F (1, 1768) = 17.91, p = .000, η^2 = .010, and discharges, F (1, 1768) = 13.05, p = .000, η^2 = .007, was significantly lower in the Quest Group, although the size of the differences was small.

When the proportion of youth receiving services in each level of care was examined, only two levels of care demonstrated significant differences. The proportion of youth receiving Therapeutic Family Home services was significantly greater in the Quest than the Non-Quest Groups, F (1, 878) = 32.64, p = .000, η^2 = .036. Multisystemic Therapy tended to be received by a higher proportion of Quest than Non-Quest youth, F (1, 878) = 6.83, p = .009, η^2 = .008. The other levels of care were all nonsignificant and displayed negligible effect sizes (all F's $\leq$ 1.45, all p's $\geq$ .229, all η^2's $\leq$ .002).

Service Expenditures

No significant differences were evident between the Quest and the Non-Quest Groups in average cost per level of care (all F's $\leq$ 1.88, all p's $\geq$ .172). Examination of the eta-squares indicated that group status explained more than 5% of the variance in average cost for four levels of care. Average expenditures for the Quest population were somewhat higher for Community High Risk Residential (η^2 = .123), Out-of-State (η^2 = .086), and Respite (η^2 = .057) services and somewhat lower for less intensive services (η^2 = .056). These total dollar amounts reported do not specifically describe services billed to Quest, but rather represent the total expenditures for youth during the quarter. Thus, even though a youth would be disenrolled from Quest when placed in out-of-state services, the dollars would be counted in the Quest involved population if the youth was Quest involved for one or more days during the quarter that they received out-of-state services. When interpreting these results it is important to keep in mind that the advantage of the eta-square effect size estimates is that they are relatively impervious to sample sizes. Taken together, these results indicated that some levels of care showed modest differences between the Quest and Non-Quest groups, but these differences may be due to sampling error.

Child Status

Detailed information regarding child status improvements on the CAFAS or ASEBA are presented in Appendix C. The proportion of Quest youth demonstrating improved child status was significantly greater than the proportion of Non-Quest youth demonstrating child status improvements, F (1, 930) = 4.34, p = .038, η^2 = .005. The percent of youth demonstrating improved child status during the first three quarters of FY 2003 significantly increased in both the Quest and Non-Quest groups, F (2, 1860) = 9.32, p = .000, η^2 = .01. The group by time interaction was not significant, F (2, 1860) = 0.12, p = .887, η^2 = .000, indicating that the improvement across time was consistent across groups.

Consumer Survey

No significant differences were evident between the Quest and the Non-Quest Groups on any consumer satisfaction scale (all F's $\leq$ 2.29, all p's $\geq$ .132, all η^2's $\leq$ .009). The overall satisfaction for the Quest group was 76% with a 95% confidence interval from 65% to 87%, whereas the satisfaction for the Quest group was 82% with a 95% confidence interval from 77% to 87%.

Summary

In sum, the Quest and Non-Quest groups were similar in many ways. Clients were predominantly male (68 – 69%) with an average age of 13.7 to 13.8 years. The primary ethnic groups represented were Hawaiian, Mixed, and Caucasian, although the relative ordering of these three groups varied. The three most prevalent diagnoses were disruptive behavior disorders, attentional disorders, and mood disorders. Although the relative prevalence of levels of care differed, the average cost per level of care was similar across groups.

A number of significant differences were evident between the Quest and the Non-Quest groups sampled during second quarter of fiscal year 2003 (see Table 2 for summary). Although the use of inferential statistics helps provide an estimate of the likelihood that these findings will replicate, it is recommended that these analyses be repeated when information is available for the whole fiscal year. If these findings replicate in the larger sample, then it is recommended that future reporting and analysis treat the Quest group as a separate population.

Table 2. Summary of differences between the Quest and the Non-Quest groups during second quarter of fiscal year 2003.

Significantly More Common in Quest Group	**Significantly Less Common in Quest Group**
DHS Involvement	New Admissions
Court Involvement	Repeat Admission
Anxiety Disorders	Discharges
Therapeutic Family Home	No Diagnosis Recorded
Improved Child Status	No Ethnicity Information Available
Tend to Be More Common in Quest Group	**Tend to Be Less Common in Quest Group**
Mixed Ethnicity	Caucasian
Incarcerated	
Mental Retardation	
Multisystemic Therapy	

References

American Psychiatric Association. (1994). Diagnostic and Statistical Manual of Mental Disorders (4th Ed.). Washington, DC: American Psychiatric Press.

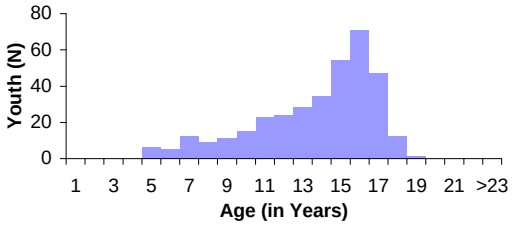
Appendix A

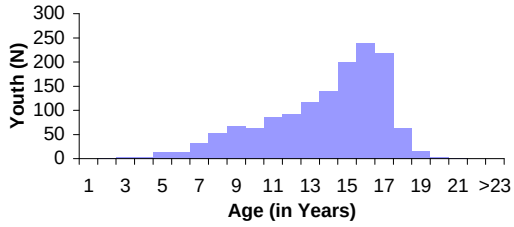
Total Population Results
Fiscal 2003 Quarter 2

Statewide Demographic Summary of Youth
For the Period of October 1, 2002 to December 31, 2002
as of March 31, 2003

Registered Quest Involved Youth	N	%	p < 0.017	Registered Non-Quest Youth	N	%
Total Registered Youth	352			Total Registered Youth	1,418	
Youth with New Admissions	9	2.6%	<	Youth with New Admissions	114	8.0%
Youth with Repeat Admits	7	2.0%	<	Youth with Repeat Admits	120	8.5%
Youth with Discharges	39	11.1%	<	Youth with Discharges	273	19.3%

	Mean	SD	p < 0.05		Mean	SD
Age in Years	13.71	3.2		Age in Years	13.80	3.2





Gender	N	% of Available	p < 0.05	Gender	N	% of Available
Females	110	31%		Females	449	32%
Males	242	69%		Males	969	68%

Ethnicity	N	% of Available	p < 0.003	Ethnicity	N	% of Available
African-American	3	1.1%		African-American	20	2.5%
African, Other	1	0.4%		African, Other	2	0.2%
American Indian	2	0.7%		American Indian	4	0.5%
Asian, Other	2	0.7%		Asian, Other	11	1.4%
Caucasian, Other	49	17.4%	*	Caucasian, Other	195	24.0%
Chamorro	0	0.0%		Chamorro	0	0.0%
Chinese	0	0.0%		Chinese	2	0.2%
Filipino	19	6.7%		Filipino	68	8.4%
Hawaiian	77	27.3%		Hawaiian	204	25.1%
Hispanic, Other	4	1.4%		Hispanic, Other	5	0.6%
Japanese	8	2.8%		Japanese	37	4.5%
Korean	1	0.4%		Korean	2	0.2%
Micronesian	1	0.4%		Micronesian	1	0.1%
Mixed	87	30.9%	*	Mixed	200	24.6%
Pacific Islander, Other	8	2.8%		Pacific Islander, Other	11	1.4%
Portuguese	8	2.8%		Portuguese	20	2.5%
Puerto Rican	5	1.8%		Puerto Rican	5	0.6%
Samoan	7	2.5%		Samoan	27	3.3%
Not Available	70	19.9%	<	Not Available	604	42.6%

Agency Involvement	N	%	p < 0.017	Agency Involvement	N	%
DHS	109	31.0%	>	DHS	127	9.0%
Court	127	36.1%	>	Court	280	19.7%
Incarcerated	33	9.4%	*	Incarcerated	90	6.3%
Quest	#N/A	#N/A		Quest	#N/A	#N/A

Statewide Demographic Summary of Youth
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as of March 31, 2003

		α_{FW} = 0.05		α_{PC} = 0.017	
	F	df_{num}	df_{denom}	p	η^2
Youth with New Admissions	13.19	1	1768	0.000	0.007
Youth with Repeat Admits	17.91	1	1768	0.000	0.010
Youth with Discharges	13.05	1	1768	0.000	0.007
		α_{FW} = 0.05		α_{PC} = 0.050	
	F	df_{num}	df_{denom}	p	η^2
Age in Years	0.22	1	1768	0.636	0.000

		α_{FW} = 0.05		α_{PC} = 0.050	
	χ^2	N	df	p	Exact p
Gender	0.02	1770	1	0.881	0.898

		α_{FW} = 0.05		α_{PC} = 0.003	
	F	df_{num}	df_{denom}	p	η^2
Ethnicity	χ^2 (17, N = 1770) = 88.234, p = .000				
African-American	1.98	1	1094	0.160	0.002
African, Other	0.09	1	1094	0.763	0.000
American Indian	0.18	1	1094	0.670	0.000
Asian, Other	0.74	1	1094	0.391	0.001
Caucasian, Other	5.26	1	1094	0.022	0.005
Chamorro	n/a	n/a	n/a	n/a	n/a
Chinese	0.69	1	1094	0.405	0.001
Filipino	0.75	1	1094	0.387	0.001
Hawaiian	0.55	1	1094	0.458	0.001
Hispanic, Other	1.66	1	1094	0.198	0.002
Japanese	1.55	1	1094	0.213	0.001
Korean	0.09	1	1094	0.763	0.000
Micronesian	0.62	1	1094	0.432	0.001
Mixed	4.28	1	1094	0.039	0.004
Pacific Islander, Other	2.72	1	1094	0.100	0.002
Portuguese	0.12	1	1094	0.728	0.000
Puerto Rican	3.11	1	1094	0.078	0.003
Samoan	0.49	1	1094	0.486	0.000
Not Available	63.83	1	1768	0.000	0.035
		α_{FW} = 0.05		α_{PC} = 0.017	
Agency Involvement	F	df_{num}	df_{denom}	p	η^2
DHS	126.54	1	1768	0.000	0.070
Court	43.48	1	1768	0.000	0.024
Incarcerated	4.00	1	1768	0.046	0.002

Statewide Demographic Summary of Youth
For the Period of October 1, 2002 to December 31, 2002
as of March 31, 2003

Registered Quest Involved Youth				Registered Non-Quest Youth		
Any Diagnosis of	N	%	p < 0.005	Any Diagnosis of	N	%
Adjustment	39	11.1%		Adjustment	137	9.7%
Anxiety	50	14.2%	>	Anxiety	114	8.0%
Attentional	84	23.9%		Attentional	367	25.9%
Deferred	0	0.0%		Deferred	1	0.1%
Disruptive Behavior	90	25.6%		Disruptive Behavior	301	21.2%
Mental Retardation	12	3.4%	*	Mental Retardation	24	1.7%
Miscellaneous	21	6.0%		Miscellaneous	103	7.3%
Mood	66	18.8%		Mood	307	21.7%
None Recorded	1	0.3%	<	None Recorded	69	4.9%
Pervasive Developmental	0	0.0%		Pervasive Developmental	12	0.8%
Substance-Related	9	2.6%		Substance-Related	36	2.5%

	Quarterly			Quarterly	
Any Receipt of Services	N	%	p < 0.005	N	%
Out-of-State	1	0.3%		5	0.4%
Hospital Residential	10	2.8%		24	1.7%
Community High Risk	4	1.1%		7	0.5%
Community Residential	49	13.9%		98	6.9%
Therapeutic Group Home	27	7.7%		54	3.8%
Therapeutic Family Home	71	20.2%	>	62	4.4%
Respite Home	0	0.0%		0	0.0%
Intensive Day Stabilization	0	0.0%		2	0.1%
Multisystemic Therapy	44	12.5%	*	137	9.7%
Intensive In-Home	120	34.1%		264	18.6%
Flex	46	13.1%		98	6.9%
Respite	12	3.4%		16	1.1%
Less Intensive	5	1.4%		11	0.8%

Any Receipt of Services	Total Cost ($)	Cost per Youth ($)[a]	Cost per LOC ($)[b]	Cost per LOC p < 0.005	Total Cost ($)	Cost per Youth ($)[a]	Cost per LOC ($)[b]
Out-of-State	29,403	29,403	29,250		110,284	22,372	22,057
Hospital Residential	346,817	34,682	26,688		529,375	32,175	22,057
Community High Risk	184,385	46,096	45,416		254,430	40,402	36,347
Community Residential	1,351,352	27,579	24,726		2,245,937	25,735	22,918
Therapeutic Group Home	666,524	24,686	19,245		935,742	20,549	17,329
Therapeutic Family Home	1,094,178	15,411	13,348		776,946	14,338	12,531
Respite Home	0	0	0		0	0	0
Intensive Day Stabilization	0	0	0		3,250	3,613	1,625
Multisystemic Therapy	313,165	7,117	3,432		418,806	4,803	3,057
Intensive In-Home	561,634	4,680	1,574		375,948	3,691	1,424
Flex	1,184,612	25,752	583		144,125	20,110	1,471
Respite	46,714	3,893	697		8,270	2,230	517
Less Intensive	110,100	22,020	1,218		26,915	14,841	2,447

Note: * p < .05; [a] Cost per youth represents the total cost for all services during the period allocated to level of care based on duplicated youth counts. Thus, the average out-of-state cost per youth includes total expenditures for youth who received any out-of-state service. If youth received multiple services, the total expenditures for that youth are represented at multiple levels of care; [b] Cost per LOC represents the unduplicated cost per youth for services at the specified level of care.

Statewide Demographic Summary of Youth
For the Period of October 1, 2002 to December 31, 2002
as of March 31, 2003

		α_{FW} = 0.05		α_{PC} = 0.005	
Any Diagnosis of	F	df_{num}	df_{denom}	p	η^2
Adjustment	0.63	1	1768	0.426	0.000
Anxiety	12.83	1	1768	0.000	0.007
Attentional	0.60	1	1768	0.437	0.000
Deferred	0.25	1	1768	0.618	0.000
Disruptive Behavior	3.09	1	1768	0.079	0.002
Mental Retardation	4.18	1	1768	0.041	0.002
Miscellaneous	0.73	1	1768	0.393	0.000
Mood	1.43	1	1768	0.233	0.001
None Recorded	15.71	1	1768	0.000	0.009
Pervasive Developmental	3.00	1	1768	0.083	0.002
Substance-Related	0.00	1	1768	0.985	0.000

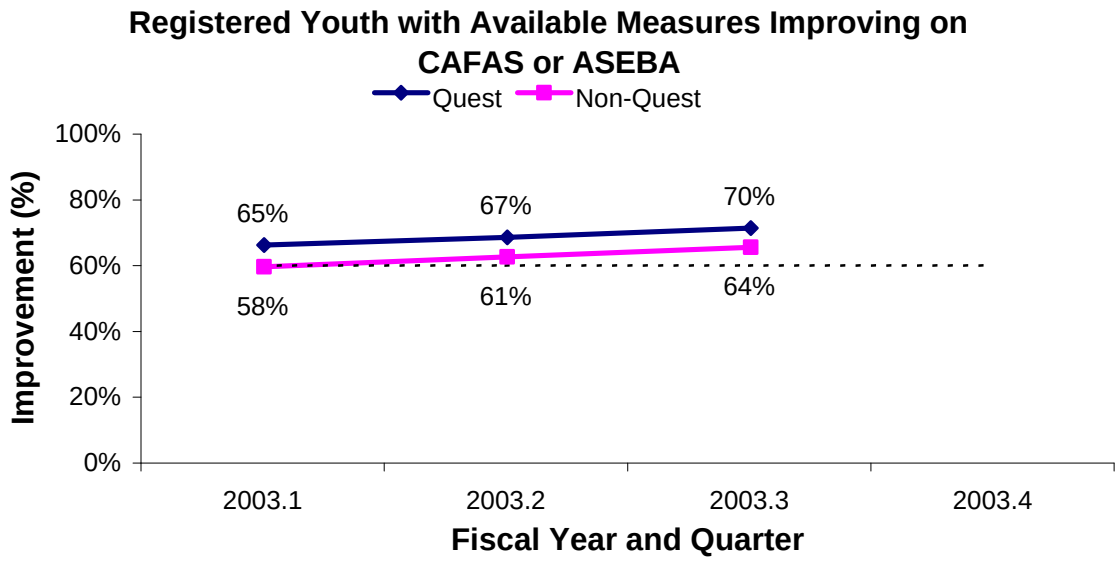
		α_{FW} = 0.05		α_{PC} = 0.005	
Any Receipt of Services	F	df_{num}	df_{denom}	p	η^2
Out-of-State	0.68	1	878	0.410	0.001
Hospital Residential	0.14	1	878	0.706	0.000
Community High Risk	0.08	1	878	0.777	0.000
Community Residential	0.07	1	878	0.788	0.000
Therapeutic Group Home	0.04	1	878	0.849	0.000
Therapeutic Family Home	32.64	1	878	0.000	0.036
Respite Home	n/a	n/a	n/a	n/a	n/a
Intensive Day Stabilization	0.96	1	878	0.328	0.001
Multisystemic Therapy	6.83	1	878	0.009	0.008
Intensive In-Home	0.40	1	878	0.527	0.000
Flex	0.02	1	878	0.902	0.000
Respite	1.45	1	878	0.229	0.002
Less Intensive	0.01	1	878	0.922	0.000

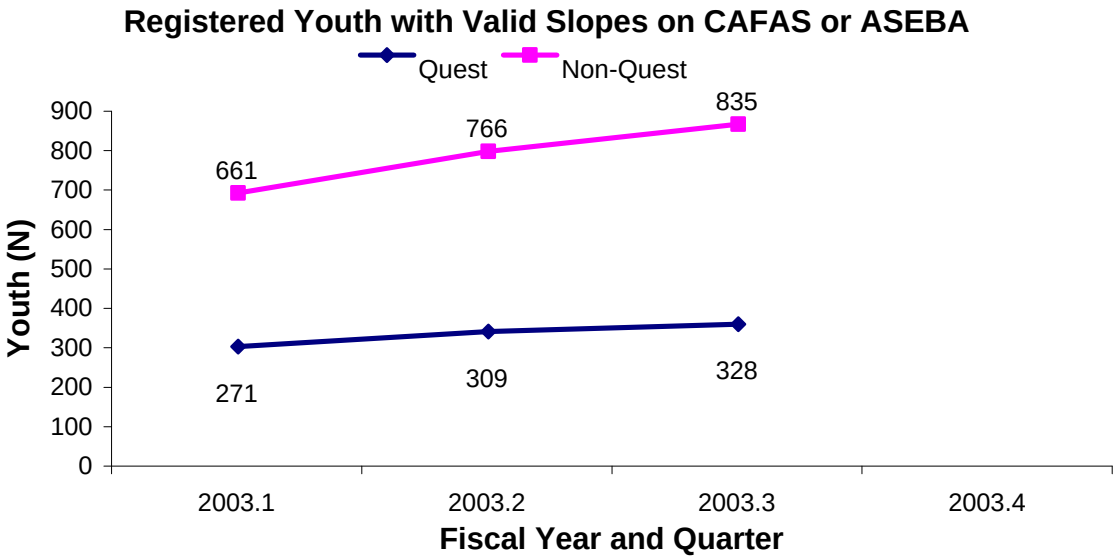
Cost per LOC		α_{FW} = 0.05		α_{PC} = 0.005	
Any Receipt of Services	F	df_{num}	df_{denom}	p	η^2
Out-of-State	0.38	1	4	0.573	0.086
Hospital Residential	0.55	1	32	0.464	0.017
Community High Risk	1.27	1	9	0.290	0.123
Community Residential	0.76	1	145	0.384	0.005
Therapeutic Group Home	0.78	1	79	0.379	0.010
Therapeutic Family Home	0.93	1	131	0.337	0.007
Respite Home	n/a	n/a	n/a	n/a	n/a
Intensive Day Stabilization	n/a	n/a	n/a	n/a	n/a
Multisystemic Therapy	1.88	1	179	0.172	0.010
Intensive In-Home	1.26	1	382	0.263	0.003
Flex	0.45	1	142	0.504	0.003
Respite	1.57	1	26	0.221	0.057
Less Intensive	0.83	1	14	0.379	0.056

Appendix B

Results for Analysis of Child Status
Fiscal Year 2003 Quarter 1 - 3

Statewide Demographic Summary of Youth
For the Period of October 1, 2002 to December 31, 2002
as of March 31, 2003





Effect	F	df_{num}	df_{denom}	p	η^2
Quest	4.34	1	930	0.038	0.005
Time	9.32	2	1860	0.000	0.010
Quest by Time	0.12	2	1860	0.887	0.000

Appendix C

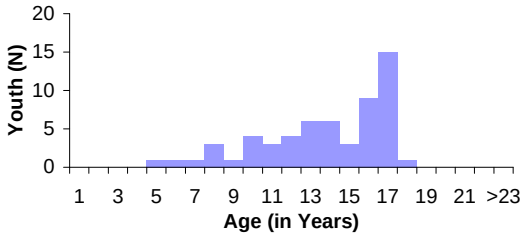
Consumer Survey Sample Results
Fiscal Year 2003 Quarters 2 - 3

Summary of Quest and Non-Quest Consumer Survey Respondents
For the Period of October 1, 2003 to March 31, 2003
as of March 31, 2003

Quest Involved Respondents

	N	%
Total Registered Youth	58	
Youth with New Admissions	#N/A	#N/A
Youth with Repeat Admits	#N/A	#N/A
Youth with Discharges	#N/A	#N/A

	Mean	SD
Age in Years	13.72	3.3



Gender	N	% of Available
Females	18	31%
Males	40	69%

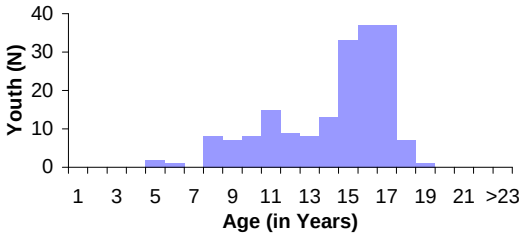
Ethnicity	N	% of Available
African-American	0	0.0%
African, Other	0	0.0%
American Indian	0	0.0%
Asian, Other	0	0.0%
Caucasian, Other	13	28.9%
Chamorro	0	0.0%
Chinese	0	0.0%
Filipino	5	11.1%
Hawaiian	14	31.1%
Hispanic, Other	0	0.0%
Japanese	2	4.4%
Korean	0	0.0%
Micronesian	0	0.0%
Mixed	9	20.0%
Pacific Islander, Other	1	2.2%
Portuguese	0	0.0%
Puerto Rican	0	0.0%
Samoan	1	2.2%
Not Available	13	22.4%

Agency Involvement	N	%
DHS	16	27.6%
Court	18	31.0%
Incarcerated	3	5.2%
Quest	58	100.0%

Non-Quest Respondents

	N	%
Total Served Youth	188	
Youth with New Admissions	#N/A	#N/A
Youth with Repeat Admits	#N/A	#N/A
Youth with Discharges	#N/A	#N/A

	Mean	SD
Age in Years	14.21	3.0



Gender	N	% of Available
Females	49	26%
Males	139	74%

Ethnicity	N	% of Available
African-American	6	4.3%
African, Other	1	0.7%
American Indian	0	0.0%
Asian, Other	1	0.7%
Caucasian, Other	47	33.6%
Chamorro	0	0.0%
Chinese	1	0.7%
Filipino	11	7.9%
Hawaiian	26	18.6%
Hispanic, Other	0	0.0%
Japanese	7	5.0%
Korean	0	0.0%
Micronesian	0	0.0%
Mixed	30	21.4%
Pacific Islander, Other	2	1.4%
Portuguese	2	1.4%
Puerto Rican	0	0.0%
Samoan	6	4.3%
Not Available	63	31.0%

Agency Involvement	N	%
DHS	19	10.1%
Court	51	27.1%
Incarcerated	17	9.0%
Quest	188	100.0%

Summary of Quest and Non-Quest Consumer Survey Respondents
For the Period of October 1, 2003 to March 31, 2003
as of March 31, 2003

Quest Involved Respondents

Any Diagnosis of	N	%
Adjustment	6	10.3%
Anxiety	6	10.3%
Attentional	15	25.9%
Deferred	0	0.0%
Disruptive Behavior	10	17.2%
Mental Retardation	1	1.7%
Miscellaneous	4	6.9%
Mood	18	31.0%
None Recorded	1	1.7%
Pervasive Developmental	0	0.0%
Substance-Related	0	0.0%

Non-Quest Respondents

Any Diagnosis of	N	%
Adjustment	7	3.7%
Anxiety	52	27.7%
Attentional	34	18.1%
Deferred	14	7.4%
Disruptive Behavior	2	1.1%
Mental Retardation	19	10.1%
Miscellaneous	19	10.1%
Mood	48	25.5%
None Recorded	19	10.1%
Pervasive Developmental	3	1.6%
Substance-Related	9	4.8%

Consumer Survey Scale	Mean (SE)	% (SE)
Acceptability	3.9 (0.08)	74 (5.8)
Access	4.0 (0.10)	70 (6.2)
Appropriate & Respectful	4.0 (0.07)	77 (5.6)
Employment	2.4 (0.12)	21 (7.2)
Family Participation	4.2 (0.06)	83 (5.0)
Least Restrictive	3.2 (0.14)	46 (10.0)
Caregiver Satisfaction	3.9 (0.07)	76 (5.7)

Consumer Survey Scale	Mean (SE)	% (SE)
Acceptability	3.9 (0.13)	72 (3.2)
Access	3.7 (0.16)	64 (3.4)
Appropriate & Respectful	4.1 (0.13)	78 (3.0)
Employment	2.3 (0.21)	23 (3.8)
Family Participation	4.1 (0.11)	81 (2.8)
Least Restrictive	3.2 (0.24)	42 (5.0)
Caregiver Satisfaction	4.1 (0.11)	82 (2.7)

ANOVA using Means	F	df_{num}	df_{denom}	p	η^2
Acceptability	0.02	1	259	0.877	0.000
Access	2.29	1	252	0.132	0.009
Appropriate & Respectful	0.14	1	252	0.711	0.001
Employment	0.00	1	152	0.947	0.000
Family Participation	0.58	1	256	0.448	0.002
Least Restrictive	0.00	1	121	0.983	0.000
Caregiver Satisfaction	1.00	1	259	0.318	0.004